

## Section 855—Steel Pile

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### 855.1 General Description

This section includes the requirements for the following types of steel pile:

- Welded and seamless steel pile
- Fluted steel shell pile
- Steel H-pile

#### 855.1.01 Related References

##### A. Standard Specifications

General Provisions 101 through 150.

##### B. Referenced Documents

ASTM A 27/ A 27M

ASTM A 252

ASTM A 709/ A 709M

[QPL 37](#)

[QPL 44](#)

### 855.2 Materials

#### 855.2.01 Welded and Seamless Steel Pile

##### A. Requirements

###### 1. Type

Use welded and seamless steel pile of the specified dimensions that meets ASTM A 252 requirements. However, use a minimum wall thickness of 1/8 in (3 mm).

- Ensure that the pile can be driven to the capacity shown on the Plans without crimping, buckling, or otherwise distorting.
- Mark each pile with the heat number or a lot number corresponding to a heat.

###### 2. Certification

Furnish all certified mill test reports or inspection reports done by an approved testing laboratory to the Engineer. The reports must certify that the pile conforms to these Specifications and show the physical and chemical properties of each heat or lot of materials.

##### B. Fabrication

General Provisions 101 through 150.

##### C. Acceptance

The Department will accept the material based on the certifications or on the results of tests conducted by the Department.

##### D. Materials Warranty

General Provisions 101 through 150.

#### 855.2.02 Fluted Steel Shell Pile

##### A. Requirements

###### 1. Type

Use fluted steel shells made of basic open hearth steel that meets the specified dimensions. Use one of the suppliers listed on [QPL 44](#).

- Use steel with a minimum tensile yield strength of 50,000 psi (345 MPa).
- Use shells with a uniformly tapered lower section, with or without extensions of the same diameter.

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- c. Reinforce the driving ends of the shells with a collar big enough to withstand being driven without injuring the shell.
  - d. Weld cast steel driving points to the tips of the shells.
2. Certification  
Furnish all certified mill test reports or inspection reports done by an approved testing laboratory to the Engineer. The reports must certify that the pile conforms to these Specifications and show the physical and chemical properties of each heat or lot of materials.

### B. Fabrication

General Provisions 101 through 150.

### C. Acceptance

The Department will accept the material based on the certifications or on the results of tests conducted by the Department.

### D. Materials Warranty

General Provisions 101 through 150.

## 855.2.03 Steel H-Pile

### A. Requirements

1. Type  
Use steel for H-pile that meets the requirements of ASTM A 709/A 709M, Grade 36/250. Use one of the suppliers listed on [QPL 44](#).
2. Cast Steel H-pile Points  
For each shipment of cast steel H-pile points, submit to the Engineer a report that includes results of tests to certify compliance with ASTM A 27/ A 27M.  
Use only the H-pile points shown on [QPL 37](#).
3. Certification  
Submit certified mill test reports to the Engineer that show the physical and chemical properties of each heat or lot of materials and compliance with these Specifications.

### B. Fabrication

1. Make cast steel H-pile points from cast steel that meets ASTM A 27/ A 27M Grade 65-35 (450-240).
2. Ensure that the points give the maximum protection to the outer corners of the H-pile and have a wide surface area to support the pile flanges.
3. Ensure that the manufacturer's name or identification mark, pattern number, and heat number are cast or stamped on all castings.

### C. Acceptance

1. The Department will accept the material based on the certifications or on the results of tests conducted by the Department.
2. The Geotechnical Bureau of the Office of Materials and Research will evaluate cast steel pile points.

### D. Materials Warranty

General Provisions 101 through 150.